



THOMAS G. NEWMAN,
EDITOR.

Vol. XXVI. April 5, 1890. No. 14

EDITORIAL BUZZINGS.

How Dreary would the garden be,
With all its flow'ry trees,
Suppose there were no butterflies,
And if there were no bees!

—Alice Carey.

☞ The recent "cold snap" will make "feeding" necessary in some apiaries. Do not neglect such if the bees are short of stores.

☞ The little son of Mr. and Mrs. Edw. Margileth, of Mt. Carroll, Ills., died on March 7. The BEE JOURNAL extends sympathy to the afflicted parents.

☞ In the article of Smith & Smith, on page 186, the width of the top-bar should be seventeen-sixteenths (not 1 7-16 as there printed). It was written in figures, and hence the mistake of the printer in putting it in type.

The Time for Spring Work will soon be here, and those who need a guide for all the operations in the apiary, should procure a copy of Dr. Miller's book entitled "A Year Among the Bees." Its descriptions commence with the necessary work in the spring, and run through the entire year, detailing the methods of doing, as well as telling when to do, all that should be done in the apiary. We have only a limited number of copies left, and those who want it should send for it at once. We will hereafter mail it, bound in cloth, to any address for 50 cents, until all are gone.

Honey Used as Medicine by the Ancients.—In all ages honey has been considered a valuable article of medicine, but we believe that henceforth it will prove itself a greater aid in healing the diseases of mankind, than heretofore. All through the ablest and oldest Book of books, honey is very frequently referred to as an excellent food element, and the prophets and wise men realized the great usefulness of this "concentrated sweetness" as a sustainer of life.

In a recent article written for the *Sunday School Times*, by Prof. A. H. Sayce, L.L.D., of Queen's College, Oxford, England, that learned investigator of antiquities has brought forth a most interesting account concerning "Medicine in the Ancient East." One of the literary documents (36 feet in length) found at Thebes, which was written about 100 years before the birth of Moses, contains a complete account of ancient Egyptian medicine. In it the different diseases known at that time are carefully described, and remedies given for treating them.

Among those mentioned in the above-named old treatise, are the following prescriptions in which honey was used:

Medicine for opening the bowels: "Take of milk one-third of a *tena*; of *nequat*-powder, one-fourth of a drachm; of honey, one-fourth of a drachm; boil, pour out, and drink for four days."

Medicine for moving the bladder: "Take of honey . . . of powder of the carob bean . . . of powder of the *vitex agnus* . . . make it into a pill."

Medicine for a purge: "Take of *senna*, one-eighth of a drachm; of honey, one-eighth of a drachm; mix and eat."

In a very long prescription for treating an attack of spleen, "which consumes the top of the heart," among the very first articles named, "half an ephah of clear honey" is mentioned, showing that extracted honey was not unknown to those who lived long before Moses.

By the foregoing quotations we see clearly that honey has been prized as a medicine for many centuries, and we are glad to see that it is again taking its proper place in the treatment of many diseases of the present day. Verily, the "land that floweth with milk and honey," is indeed a goodly land now, as well as in the days of Moses.

In California bees are now ready for the honey harvest. Mr. S. L. Watkins wrote us as follows on March 27, concerning their present condition:

The bees in this part of California, have wintered exceedingly well, considering the bad weather we have had. All colonies are now strong in brood and bees. The alfileræ is beginning to bloom, and the mountain-sides are clothed in their mantles of green.

☞ Mr. W. C. R. Kemp has sent a sample of his cold-blast smoker to our Museum. It is neat, and substantially made.

Bee-Escapes.—We are pleased to notice that so many are working on bee-escapes. It shows that there is a real need for such a contrivance, and the intelligence and inventive genius of bee-keepers will develop something that will be valuable. We this week give an illustrated article from Mr. John S. Reese, showing his latest development. Last week we gave an illustration of one invented by Mr. C. Russell. Concerning the latter we have received several criticisms, one of which is as follows:

The exit hole A is entirely too small; 3 inches would be better. The triangle being made of wood, will lead the bees directly to the exit B. Of course many will pass over or around the open end of the triangle, but many others will easily find the opening.

Baboons Eat Honey.—The bee-enemies in America are many, and skunks, bears, rats and mice steal the honey, but their depredations are not to be compared with what African bee-keepers have to contend with. The South African baboon has made the discovery that honey is good to eat, and comes down from the mountains of the district he inhabits, and carries off hives, honey and all, utterly destroying an apiary at one visitation. We ought to be thankful that we have no baboons.

Alsike Clover chaff is good feed for cattle, says the Fremont, Mich., *Indicator*. Here is the item:

Mr. Wm. Davis threshed from 1 1/4 acres ten bushels of Alsike clover seed. He says his cattle ate the chaff in preference to any other feed.

Friend George E. Hilton lives at Fremont, and no doubt picked up that interesting item, and got it into the *Indicator*. He always has an eye to business.

To Prevent Robbing, close the entrance so as to give passage but for a single bee at a time. This is effective, if the bees will defend themselves; if not, remove them to a cellar for a few days, then place them on a new stand, or exchange places with the colony that is robbing it.

The White Sage of California, has been long and favorably known as an excellent honey-plant; giving some of the lightest-colored honey in the world; but, like our basswood, its area is getting to be limited. It is fast disappearing before the cattle, sheep and plow.—*Exchange*.

☞ According to Geo. P. Rowell & Co's American Newspaper Directory for 1890, Illinois is now the second State in the Union in the number of newspapers printed, having 1,300, while Pennsylvania has but 1,281. New York has 1,778.

GLEAMS OF NEWS.

Painting Bee-Hives.—As the subject of painting hives is being considerably discussed just now, it may be interesting to know what others are saying in regard to the matter. Mr. Theilmann, in his article on page 217, has advanced an idea that may be more than mere theory, when once thoroughly investigated, as it doubtless will be looked into in the future.

In this, as well as in other matters pertaining to the pursuit of bee-beeping, it may be very profitable to experiment, for if it is really unnecessary—or quite detrimental—to paint bee-hives, those who are getting their hives will want to know it before they go to the expense of beautifying the homes of the bees with artistic colorings that may prove to be harmful to the lives of the occupants during the trying winter season.

The following paragraphs from an exchange, taking the opposite view, may be valuable, although it does not mention what success has been had in wintering bees in the painted hives:

My experience is that it pays well to paint bee-hives three or four good coats, when made. I recently saw bee-hives which I made some seven years ago; at that time I gave them three coats of white lead, zinc and oil. Two years later I sold them with bees in, and they have been exposed to the sun, rain and winds ever since, without any further painting. They are now in fair condition, look well, not sun cracked, and the corners not drawn apart as unpainted hives usually are in a year or two.

I sometimes mix a little red in the last coat for the front of some of them, just to make a little difference, so as to assist the bees in finding their particular hive. I do not know, however, that there is any advantage in this; for it seems to me that bees know how to find their homes, as well as we would if a hundred other houses just like ours were around it.

White paint is durable, and is cooler in summer than any other tint; and if the hives are within four inches of the sod or ground, I rarely have any combs melt down. In fact I do not remember having had a case of it for over seven years, notwithstanding the hives are in the open sun, without any shade at all, either natural or artificial. If painted a dark color, which is sometimes done to save a few cents in material, the combs are exceedingly liable to melt down in the heat of summer, thus causing more loss than is saved in buying cheap paint. My friends say that my bee-yard resembles a little cemetery, with its long rows of white hives; but while that may be so in winter, it resembles a Chicago Board of Trade in summer, to judge of the way they do business.

Stanley is to have a rival. An exploring expedition is just starting for the interior of Alaska. It is sent out by Messrs. Arkell & Harrison, proprietors of "Frank Leslie's Illustrated Newspaper," who offer prizes of a \$200 photographic camera, and a \$50 Kodak to the amateur photographers who shall send to it the most artistic specimens of their work. "Frank Leslie's" last week portrays vividly the cruelties practiced on United States marines.

They Eat the Eggs of Bees.—The curious life-history of insects is always interesting. We give the following from an exchange:

There is a hard sand-stone in Provence, interspersed with friable strata, in which burrowing insects construct their chambers. A kind of bee, the anthophorus, says H. de L. Duthiers in the *Popular Science Monthly*, makes nests there and fills them with honey, on which it leaves its eggs to float, then, finally, plasters up its chamber. Instead of anthophores, entirely different insects come out from the nests—sitaris, belonging to a group very remote from the bees. Let us see how they manage to substitute themselves for the legitimate proprietor of the nest.

In the autumn the impregnated female of the sitaris deposits her eggs in front of the sealed galleries of the anthophores. The young are hatched from these eggs and lie in front of the closed doors, and thus remain in a mass, mingled with the dust and rubbish of the place, through the winter.

In the spring, such of the bees as have reached their term, come out from their prison. These earliest insects are all males; but, though precocious in being hatched, they are still tender to the changes of the weather, and remain half frozen and torpid in the dust along with the young of the sitaris.

They have been called triangulins by Leon Dufour, from the claws with which they are armed, and by which they attach themselves to the bodies of the anthophorus waiting for the next stage in the conditions that favor their development. With fine weather the anthophorus come out and carry on their work of burrowing and storing up honey until the time of fecundation arrives. Then the triangulin changes its quarters from the body of the male to that of the female, where it remains on the watch for the laying of the egg, when it transfers itself to that, and with it enters the honey-chamber.

With it it is shut up when the anthophorus closes the door of the chamber for another season. The triangulin will not eat the honey, for it is sure death to it by drowning if it touches it. It floats on the egg, and feeds upon it. When it has used up its ration it changes its shape, as well as its habits and tastes. It is as eager now for the honey as it was to keep away from it, and grows upon it until it goes through another change, and becomes the sitaris which we observe coming out from the chambers of the anthophorus. Three years of assiduous studies and investigations were required to obtain this life-history.

Signs of Progress.—Under this heading, D. R. Emery, of Longmont, Colo., writes to the *Farmer* as follows, on March 13, 1890:

In the AMERICAN BEE JOURNAL we notice descriptions of hives, and improvements in handling and hiving swarms. This shows life and progress. Thinkers and experimenters are sometimes called "cranks," but it is through such leverage we are sometimes lifted out of old and worn-out ruts, into ways of progress and useful convenience.

What are some of the needs of the busy apiarist? Simply, expeditious hiving of swarms; easy access and handling of frames, sections and honey; exclusion and control of bees and queens. Alley and Lacy show quite a simple automatic swarming-hive, the principle of which seems correct; which, no doubt, with a proper understanding of adjustment and material used, will prove a great blessing, and be appreciated by the fraternity.

Hints to Supply Dealers.—The following letter just received from one of our advertisers, who speaks from years of experience, should be read by all who have anything to sell, and desire to find purchasers for the same:

During the year 1888, we had an advertisement running in the American Bee Journal, and we had the same in several Daily and Weekly papers, but to our surprise we received more than double the number of responses from the advertisement in the American Bee Journal, than from all our others combined.

The fact that we are still receiving letters referring to our advertisement in the Bee Journal, shows that it is preserved and read long after it is received. Newspapers are read and thrown aside and that ends it, but the Bee Journal is preserved, and the advertisements are often noticed and bring responses long after they appeared in it.

We regard the American Bee Journal as a first-class advertising medium.

Cedar Rapids High-Speed Engine Co.,
HENRY RICKEL, President.
March 22, 1890.

New Catalogues and Price-Lists for 1890 are received from—

Dr. G. L. Tinker, New Philadelphia, O.—24 pages—Hives, Sections and Bees.

W. W. Bliss, Duarte, Calif.—4 pages—Apriarian Supplies.

Aaron Hunt, Gordon, O.—24 pages—Supplies for the Apriary.

H. H. Brown, Light Street, Pa.—18 pages—Bees and Bee-Keepers' Supplies.

W. S. Vandruff, Waynesburg, Pa.—8 pages—Bees and Supplies for the Apriary.

W. J. Row, Greensburg, Pa.—8 pages—Apriary and Hive Factory.

Levering Bros., Wiota, Iowa—20 pages—Bees-Keepers' Supplies.

F. C. Erkel, Le Sueur, Minn.—4 pages—Apriarian Supplies.

J. W. Clark, Clarksburg, Mo.—12 pages—Bees, Queens and Supplies.

Frank A. Eaton, Bluffton, O.—16 pages—Italian Bees and Queens. Also another of 6 pages devoted to Poultry.

G. D. Black & Bro., Independence, Iowa—16 pages—Seeds and Apriarian Supplies. Lewis Roesch, Fredonia, N. Y.—20 pages—Small Fruit Plants, etc.

Convention Notices.

The spring meeting of the Northern Illinois Bee-Keepers' Association, will meet at the residence of D. A. Fuller, in Cherry Valley, Ills., on May 19th, 1890.

D. A. FULLER, Sec.

The next regular meeting of the Southwestern Wisconsin Bee-Keepers' Association will be held at Bosobel, Wis., on Thursday, May 1, 1890, at 10 a.m.

BENJ. E. RICE, Sec.

The 12th annual session of the Texas State Bee-Keepers' Association, will be held at Greenville, Hunt Co., Texas, on May 7 and 8, 1890. All interested are invited.

J. N. HUNTER, Sec.

The spring meeting of the Capital Bee-Keepers' Association will be held in the Supervisor's Room of the Court House at Springfield, Ills., at 10 a.m., on May 7, 1890. The following subjects will be discussed: "Production and Care of Comb Honey," by Jas. A. Stone; "Prevention of After-Swarms," by A. Lewis; and "Creating a Home Market," by G. F. Robbins. All interested are cordially invited to attend.

C. E. YOCOM, Sec.

The spring meeting of the Missouri State Bee-Keepers' Association, will be held at Marshall, Saline Co., Mo., on Wednesday and Thursday, April 16 and 17, 1890, in the County Court Room. Reduced rates at the hotel, for bee-keepers, have been secured, and a committee at work to secure rates on the railroads. A cordial invitation is extended to bee-keepers everywhere, and especially to those of Missouri. A number of essays from prominent bee-men are expected, and an interesting time is anticipated.

J. W. ROUSE, Sec.

QUERIES & REPLIES.

Building a House for General Use in the Apiary.

Written for the American Bee Journal

Query 698.—1. What would be the most convenient arrangement for a house to be used for all the accommodations of an apiary of 75 or 100 colonies, to include shop, store-room for honey, hives, etc.? 2. Should it be one story high, or two?—W. Va.

2. I prefer a two-story building.—G. M. DOLITTLE.

I am not prepared to answer either question.—M. MAHIN.

1 and 2. Your own taste and convenience should decide.—A. B. MASON.

Get any of the standard works on apiculture for answer.—G. L. TINKER.

Two-stories high; make a double floor above, so that no dust will work through the floor.—H. D. CUTTING.

1. I think that the one illustrated in my "Bee-Keepers' Guide" is excellent. 2. Two stories.—A. J. COOK.

1. Space will not admit of a reply to this query in this department. 2. It should be two stories, unless in a dangerously windy location.—JAMES HEDDON.

1. I could not give a full answer in so small a space. 2. I prefer two stories.—C. MILLER.

This question is treated in the bee-books, and requires too long an answer for this place.—J. M. SHUCK.

I would advise the questioner to visit some well-managed aparian establishment, and look around. To answer this question, would require a whole article, with diagrams.—J. P. H. BROWN.

1. This would depend much upon the situation of the bee-yard, surroundings, etc., details of which would be too lengthy for this department. 2. I presume a two-story building would be preferable.—J. M. HAMBAUGH.

I like mine, which is 30x30 feet, one story, divided into two rooms below—one for honey, and the other a shop. There would be plenty of room above for storage of hives, etc., which answers well for 400 or 500 colonies.—R. L. TAYLOR.

If I were to build such a house, I would figure on an octagon two-story building, 14 or 16 feet across. I would use the ground floor for a shop, and the second story for honey, and such other fixtures as would seem best.—EUGENE SECOR.

1. A house about 14x18 feet. 2. Two stories high, the upper story to be used for a shop for making hives, etc., and storage of the same; the lower story for the storage of honey, cases, etc., and a cellar underneath could be used for the storage of bees in winter.—MRS. L. HARRISON.

1 and 2. Octagonal, two stories high, with L for work and storage room. I do not think that a house apiary will be a success, and would not advise any one to build one; I speak, however, from information—not from experience.—J. E. POND.

I should set it on high ground, and have a good bee-cellars under it. The shop I would arrange on one end of the first floor, and a store-room for honey on the other. A second story would be very convenient for storing empty hives, supers, etc.—C. H. DIBBERN.

This department is too limited in space to more than hint at a plan for convenient apiary buildings. My plan is to have the

building but one story high; 15 feet wide, and as long as necessary for all purposes. Have an 8 foot office in front, next to the honey store-room, then the extracting room $7\frac{1}{2}$ feet, and, lastly, the shop. A good cellar under the store and extracting rooms will be convenient and useful.—G. W. DEMAREE.

Build it to suit your fancy or requirements. We should prefer it to be two stories high, about 20x30 feet, with two rooms below and one above. The latter should have a double floor to keep the dust from the lower rooms, in one of which the honey can be stored; the other would make a good work-shop. The upper room will be excellent for storage.—THE EDITOR.

Langstroth Hive—Placing the Comb Honey Super.

Written for the American Bee Journal

Query 699.—1. What is the proper proportions for the Langstroth hive? 2. Should the super for comb honey fit directly on the top of the hive, or *inside* of the same—resting on the top of the frames?—Michigan.

2. On top.—MRS. L. HARRISON.

2. On the top of the hive.—R. L. TAYLOR.

1. If I used the Langstroth hive, I would have it hold ten frames. 2. On the top of the hive.—M. MAHIN.

1. Nineteen and $\frac{1}{2}$ inches long, outside measure; $15\frac{1}{2}$ inches wide, outside measure, and 10 inches deep. 2. On top the the hive.—A. B. MASON.

1. See Langstroth's book. 2. It should fit the honey-board, resting on the outside rim of the hive—never on the brood-frames.—C. H. DIBBERN.

1. The *Langstroth*, of course, otherwise it ceases to be a Langstroth hive. 2. On top of the hive or a honey-board.—G. M. DOLITTLE.

1. The frame is $17\frac{1}{2}$ by $9\frac{1}{2}$. The hive I prefer holds eight frames, so that it would be, inside measure, $12\frac{1}{2}$ inches, and 10 inches high. 2. On the hive, scant $\frac{1}{2}$ of an inch above the frames. I prefer this.—A. J. COOK.

1. The Langstroth hive that I use is 20 inches long, $13\frac{1}{2}$ wide, and $9\frac{1}{2}$ inches deep, outside, made of $\frac{1}{2}$ -inch lumber. The frame is the "standard Langstroth," $17\frac{1}{2}$ by $9\frac{1}{2}$ inches. 2. The super should rest on the hive, and the same size outside, as the hive.—H. D. CUTTING.

1. The Langstroth frame is $17\frac{1}{2}$ by $9\frac{1}{2}$ inches—top-bar 19 inches long. Now you can make the body of the hive to suit the number of frames you desire. 2. I prefer to have the super *inside* the hive, and to rest on top of the frames.—J. P. H. BROWN.

1. Unfortunately, the size of the Langstroth frame is not uniform, as made by different men. I always supposed it to be $17\frac{1}{2}$ by $9\frac{1}{2}$ inches, outside measure. Some make it $17\frac{1}{2}$ by $9\frac{1}{2}$ inches. Of course there should be a bee space above, below, and at the ends of the frames. The size otherwise can be made for as many frames as you desire to use. 2. I like it resting on the hive only—a bee space above the frames.—EUGENE SECOR.

1. The dimensions of my hives which use the generally adopted Langstroth size of frames—length $18\frac{1}{2}$, depth $9\frac{1}{2}$, and breadth $15\frac{1}{2}$. This is inside measure, and will accommodate ten frames $17\frac{1}{2}$ by $9\frac{1}{2}$ inches, spaced $1\frac{1}{2}$ inches from center to center. 2. On top of the hive.—J. M. HAMBAUGH.

1. There are many sizes and proportions for a Langstroth hive, and opinions vary very much. If I wanted to get the largest results in comb honey, I would use the

wood-zinc queen-excluder, and an eight-frame hive of the length of the standard Langstroth, but the brood-frames should be only 7 inches deep. But it is not proper to use a queen-excluder, in working for comb honey, on an eight or ten frame Langstroth hive of the usual size. 2. On the top of the hive.—G. L. TINKER.

Take the Langstroth frame and make the hive deep enough to leave a bee-space of $5\frac{1}{2}$ of an inch on top of the frames, and long enough to leave $5\frac{1}{2}$ or $\frac{1}{2}$ of an inch at each end; then it depends upon how you want to space the frames, and the number you wish to use, what width you will adopt. 2. I prefer them on the top of the hive, but it is possible I am wrong.—C. C. MILLER.

The Langstroth hive should be $14\frac{1}{2}$ inches wide, and long enough to carry a frame that will hold four $4\frac{1}{2}$ by $4\frac{1}{2}$ sections; that is to say, the size of the "Simplicity." This will take ten frames. Some prefer a narrower hive, to take eight frames only. The proportion should be the same in the narrower hive.—J. E. POND.

1. The Langstroth hive should never be made. Many improvements of it are better than the original. The inside dimensions of the Langstroth are—depth 10 inches, length $18\frac{1}{2}$ inches, and width 15 inches. These are *inside* measurements. 2. There was a bee-space between the frames and the "honey-board," and the super or boxes rested on the honey-board.—J. M. SHUCK.

My undersized Langstroth hive is simply a well-made box, $14 \times 18\frac{1}{2}$ and $9\frac{1}{2}$ inches deep, inside measure. This I call the "hive body." The hive body is rabbeted at the ends, so that the standard Langstroth frame, when in place, is adjusted in a central position in the hive body, having half the bee-space above, and half below the frames. These hive bodies are used for brood-chamber and for upper stories. A rimmed bottom-board is used that may be fastened on with clamps or not. I hardly ever fasten the bottoms. Section-cases are made the same size, but, of course, of proper depth for the sections. The queen-excluders have wood rims around them with half a bee-space on both sides. The whole is arranged so that one department will tier on a *square joint*, one on the other. The standard Langstroth frame is $17\frac{1}{2} \times 9\frac{1}{2}$ inches. Nothing beats this arrangement.—G. W. DEMAREE.

1. The best that I have ever used for the standard Langstroth frame, eight in number, has an inside net dimension as follows: Ten inches deep, $11\frac{1}{2}$ wide, $18\frac{1}{2}$ long; outside measure, $10\frac{1}{2}$ inches deep, 13 wide, and $19\frac{1}{2}$ long. 2. Directly on top of the hive, never sliding over on the outside, nor on the inside the least bit. Avoid all that, as you would foul brood. The super should not rest on top of the frames. There should be a bee-space between the bottom surface of the super and the top of the frame. This bee-space should be in the top of the brood-chamber, and never anywhere else, under any circumstances.—JAMES HEDDON.

The Report of the proceedings of the 20th annual session of the International American Bee-Association contains, besides the interesting report, the new songs and music then used, and engravings of the present officers as well as the retiring ones. In all, it contains 86 pages. It is for sale at this office. The price is 25 cts., postpaid.

Clubs of 5 for \$4.00 to any addresses. Ten for \$7.50, if all are sent at one time.

CORRESPONDENCE.

WIDE FRAMES.

Are they any Better than the T-Supers?

Written for the American Bee Journal

BY DR. C. C. MILLER.

On page 184, Mr. J. V. Caldwell discusses the matter so fairly that I take pleasure in replying to his challenge. I have a very kindly feeling toward the wide frame for the good it has done, and I assure you that I would not to-day have hundreds of them lying idle in my shop loft if I had not found something to take their place that has proven itself a good deal better. But that does not prove to *you* that they are better, friend Caldwell, only that I think so. You say that they have only one fault that you know of, the difficulty of taking out sections. That alone would not condemn them. It is a *very* difficult thing to get a *single* section out of a tight-fitting wide frame, but the whole frame can be emptied with comparative ease, especially if made as I think the best way. And let me say right here, that if I were to go back to wide frames again, I would have them one tier high, top-bar the same width as the bottom, and with a bee-space between the top of the section and the top-bar, as Mr. Oatman used them.

Now let us see your points. You think it no advantage that "any width of the $4\frac{1}{2}$ section can be used." I doubt if you know what you are talking about as well as I do. Some years ago I had the same season $4\frac{1}{2} \times 4\frac{1}{2}$ sections of five different widths—had them by the hundred—so I *know*. Well, if you knew the trouble I had with those different widths, and how a few would lie over unfinished of each kind to torment me for two or three years, and how I finally burned some of them to get them out of the way, you would say more emphatically than ever, "I want just one size of sections." So I think we will shake hands on that.

But I cannot agree with you on the next point. When you want all the sections out of a super, it surely is an advantage to be able to take them all out in a lump. I hardly think that you mean it is not, but you mean that it is easier to take part out of a wide frame super than out of a T super. Well, that depends. I can take a single section out of a T super in less time than I can out of a wide frame super, but if the wide frame contains

four sections (and I do not believe it is best to have more than four sections in a frame), and especially if there is a bee-space over the sections and under the top-bar, I can take the four sections out of the wide frame a good bit sooner than out of the T super. But it is a rare case that you want to take just the one frame out. Before the end sections of a frame are finished, the middle sections of the adjoining frame are finished.

As a general rule you do not want to take sections out of a super until the majority are finished, the corner sections and perhaps a few others are left unfinished. In that case, whether wide frame or T be used, you are likely to take out the whole affair, pick out the unfinished ones, and put them in another super to go back on the hive. Or with the T super you can easily, with the proper machine, push the sections all out except about one-fourth of an inch or so of the bottoms of the sections, pick off the unfinished ones, and then let the finished ones all slide right back again into their old super. Taken altogether, I think the convenience of taking out part or all the sections, as desired, is very much in favor of the T super.

"The T super contains too many loose pieces." A fair criticism, but it is hardly fair to say "while the wide frame is compact, and has no loose pieces whatever," for you are not to compare the T super with a single wide frame, but with a super of wide frames. In a T super of 24 sections, there are five separators and three T tins—eight loose pieces. In a wide-frame super of the same capacity, there are six wide frames, or six loose pieces, for each frame is a loose piece just as much as each T tin is a loose piece. So the T super has a third more loose pieces than the wide frame super, and I think the T tins are a little more troublesome as loose pieces.

"The wide frame also protects the sections on all sides from the bees, and to accomplish the same result with the T supers, a lot of pieces must be laid on the top and the bottom of the sections." You are surely laboring under a misapprehension. I would not put a lot of loose pieces on the top and bottom of the sections, because there is less propolis on a section in a T super than in a wide frame. The bees thrust glue in between the top-bar and the section as also at the bottom, and they put very little glue on a plane surface to which they have free access.

In addition to the matters mentioned I may say that the wide-frame super is more expensive. That, however, did not weigh with me, for I had the wide frames, and it was more expensive to change. The wide frame super is

longer and deeper, so it takes up more room, and it weighs more. I have wide frames for sale, but no T supers.

Marengo, Ills.

SELF-HIVERS.

Proposed Experiments with Self-Hiving Arrangements.

Written for the American Bee Journal

BY W. HARMER.

I will begin by asking a conundrum, viz.: Why is *La Grippe* like the self-hiver? My answer is, Because it has come into existence in different parts of the country at the same time. But I hope that the self-hiver will stay longer than *La Grippe*. I think that it will, as there is much need of it.

I have already thought out the same plan as described in Mr. Sawyer's article on page 183, who asks for the views of some practical bee-keeper. I claim to be one, as by it I get my bread and butter. I have kept bees about twenty years, and have had in that time a great deal of experience with them, as I was intensely interested in their work, and longed to be able to make a special study of their habits and methods of work; this longing is about to be realized, as I commence this season with nothing else in view as an occupation.

About three years ago, as I was working my bees for extracted honey, I found that where I had lifted the most of the brood into the upper story of a colony, and shut the queen below, they were not inclined to swarm, and in nearly every instance they had in due time a young queen in the super, which I made use of by carrying all the bees to a new stand. I was satisfied that if I had cut a little hole in the top story, I could have had two fertile queens in the one hive, or two complete colonies living together. Here I saw food for thought, and also a great benefit to be derived from experimenting along this line, but I always had "too many irons in the fire" (poultry, small fruit-growing, etc.) until now; but the experiments have been going on just about the same, and Mr. Doolittle has come out "on top of the heap." If you don't believe it, just read his book.

I will now give my views of Mr. Sawyer's plan, by describing my plan, which I have decided to try the coming season. It is as follows:

Cut (by measurement or pattern) before the hives are put together, a $1\frac{1}{2}$ or 2 inch hole in the sides of the hives; place two hives on one stand, side by side, one facing east and the other west; then before swarming

commences, prepare the empty ones of each pair with frames of foundation or empty combs. I see no need of a queen-excluder between the hives, as I would allow the old queen with clipped wing to occupy the new home, which I am pretty sure she will do, as soon as they begin to be the least crowded for room. This, I believe, would be better than Mr. Sawyer's way of having the queen-cells mature in the new hive.

I do not know that there is a necessity for a queen-excluder even after the old queen has taken up her new quarters. I have strong grounds for believing it unnecessary, as I believe that a great many queens can occupy the same house or hive (if it is large enough) with easy access to each other's quarters—in fact, I make the assertion that it is so, and I will give my reasons for so saying, in another article. I think that this subject has a great deal to do with bee-keeping in the near future, and one that needs experimenting.

Mr. Sawyer asks how to use this plan when wanting no increase. It seems to me that here is where there will be a benefit, as the two colonies are already united, and all that needs to be done is to save the best queen by killing the worst, or taking all the combs out of one hive in the fall, letting all the bees and queen run on the combs of the adjoining hive, and allowing Nature to take its course, especially if both queens are good, and the bee-keeper has no use or sale for her. What do bee-keepers say to this? "Let your light so shine," etc.

Manistee, Mich.

BEE-ESCAPE.

A Diamond-Shaped One—Latest Simple Arrangement.

Written for the American Bee Journal
BY JOHN S. REESE.

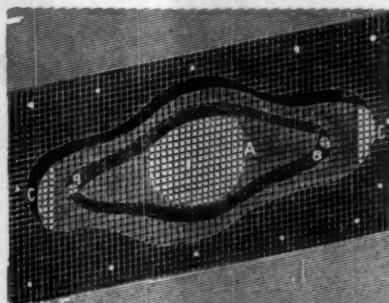
The growing demand for bee-escapes, and information how to make and use them, has induced me to make models of quite a number of shapes. Mr. C. H. Dibbern claims the introduction of the horizontal arrangement, under a hole in a board and in the bee-space, and I have one of his models. It is good of the kind, but I will proceed with mine.

The accompanying illustration will clearly show a very simple and easily-made arrangement within the board and flush with both sides, that would not seem to need more describing.

We will take for granted that a board $\frac{1}{2}$ to $\frac{1}{4}$ of an inch thick will make a good inner cover, and such

boards are accessible to almost every one. These boards should be made of such size, and bee-spaces to suit the hives used. In the center of the escape-board make a point with a scribe-awl, in which to start your bit. Just two inches from this center-point, and on each side of it on a line the long way of the board, make two more points. Now bore one 3-inch hole in the centre, and one $1\frac{1}{4}$ -inch hole on each side; a scroll-saw will cut this hole nicely. These holes will make an opening to receive the escape, which is made as follows:

One piece of wire-cloth 4 inches wide and 7 inches long, with a $1\frac{1}{4}$ -inch hole in the center for the top side. One piece of wire-cloth 4 inches wide and $5\frac{1}{2}$ inches long for the under side. The narrow strip of wire-cloth that forms the cone, and goes between the top and bottom pieces, should be just



Reese's New Bee-Escape.

a fraction wider than the board is thick, and 11 inches long. This strip is put into proper shape by bending it around a little block of wood, made diamond shaped, $4\frac{1}{2}$ inches long and $2\frac{1}{2}$ inches wide, the points being made round and blunt.

It will be found best to make the lap and join the ends on the side of the diamond, and cut the exit holes in each end of the diamond cone strip (B B) with a pair of pointed scissors. The cone-strip should be attached to the top-piece, which has the hole in it, with short pieces of wire, and then adjusted in the board and tacked to it. The under piece should next be tacked on in such a manner as to allow an exit at each end, as shown in the cut at C C. This very simple arrangement forms a double cone or barrier, and the expense of material and time to make it is scarcely worth computing.

To make the $1\frac{1}{4}$ -inch hole in the top piece or the wire-cloth, take two pieces of $\frac{1}{4}$ -inch board the same size as the wire-cloth; bore a $1\frac{1}{4}$ -inch hole in the center of each, and place the wire-cloth between, clamp together, and cut out the wire-cloth in the hole with a pen-knife. This can all be done in

less time than it takes to write it. The engraving shows the top of the escape.

Please bear in mind that this pattern of a bee-escape has not had a practical test during a honey-flow, but has every indication of being a perfect success. Any pattern of a bee-escape will work to perfection under feeders, cleaning out extracting combs or sections, etc. This unusual excitement does not exist when an escape is used during a honey-flow, when we want to take off full cases (extracting or sections), and lead the working force automatically down into an empty super or brood-chamber.

This escape-board can be used as an inner cover by simply placing a thin board or piece of tin over the escape, and if the bees should daub it up with propolis, hold the escape over a heat (a lamp or a few shavings on fire), when it can all be jarred off at one lick.

Winchester, Ky.

DEADLY SPRAY.

The Spraying of Fruit-Trees—Plant-Curelio, etc.

Written for the American Bee Journal
BY L. F. ABBOTT.

In the AMERICAN BEE JOURNAL for March 15, in reply to Mr. R. G. Robertson, of Marshall, Mo., regarding the spraying of fruit-trees for the destruction of various larvae which prey upon the fruit, the question is asked: "Why use poison at all?" And then this valuable information is cited: Mr. Peter Brickey gave last year regarding the curelio, and a method of preventing their depredations.

In the first place, was what Mr. Brickey says true (which it is not) of the curelio, that they crawl up the trunk of the tree which they infest, the method which he gives would not signify in preventing the ravages of the great enemy of orchard fruits—the larvae of the codling-moth. There need be no trouble nor apprehension of disaster to bees by spraying of fruit-trees, if we will take the trouble to go about the business understandingly, and in a common-sense manner.

First, let us understand the habits of the insects we wish to combat. The great enemy of the apple-orchard is the codling-moth larvae. These are propagated by a little miller which appears at intervals through the summer, and deposits its eggs in the blossoms of the apple. Its appearance in early summer is governed by the season; but it may be confidently expected when the apples are just set, and the blossoms have entirely dried up. The codling-moth flies at night,

and visits the small apples—never the flowers—and deposits one egg only in the calyx of the embryo fruit. In a few days the eggs hatch, and the little worm—the merest mite—commences to eat its way into the fruit.

Spraying the tree with the poisoned water even as soon as the eggs of the moth are laid, if no rain intervenes, will prove efficacious in destroying the larvae, as at this stage of the growth of the fruit, the calyx is upward, and offers the best possible means of destroying the worms, as the liquid applied with a fine spraying nozzle—and no other should be used—is sure to drop into the upturned cup of the fruit, so when the worms commence to eat, it is to their death.

To be most effectual, the spraying should be done once in ten days after the first application until the fruit tips and turns the calyx down. The first brood of worms which infest the apples before they turn downwards, proves by far the most destructive. However, later spraying of the trees to destroy a second brood of worms, which, probably appear in Missouri, say in July and the first of August, would undoubtedly destroy many of these later larvae, and I should certainly recommend its trial.

Great care should be exercised in mixing the poison, not to get it too strong, and thus injure the foliage. A pure article of Paris-green or London purple, using one pound to 200 gallons of water, is of sufficient strength. In using Paris-green, means should be used to keep the water thoroughly agitated while applying, as the poison is not dissolved by water, but only held in suspension, and quickly settles to the bottom of the vessel, if not stirred. With the common brands of the article as usually bought for killing of potato-bugs, 150 to 175 gallons of water to the pound may be safely used.

THE CURCULIO.

The plum curculio is a very different insect from the codling-moth. The latter *Carpocapsa pomonella* belongs to the order of *Lepidoptera*, which includes all the butterflies and moths. The curculio is one of the snout beetles, order *Coleoptera*, genus *Conotrachelus nenuphar* Herbst, and is not dependent by any means upon his legs alone for means to get at the young fruit of the plum-trees, which it punctures and deposits an egg therein; in fact, it is doubtful if these little beetles ever crawl up the trunks of the trees they infest at all; the wings forming a much more speedy and effectual means of accomplishing their object. Hence, Mr. Brickey's kerosene-saturated bands are entirely useless for the purpose of preventing the ravages of the curculio.

There are certain caterpillars, and the female of the canker-worm moth, which is wingless, which might be partially hindered from ascending the trees by such bands, but they would need to be quite broad and frequently saturated with kerosene at the risk of injuring the trees.

In no case do the beetles infest the flowers to their damage, nor would it be of the slightest use to spray the fruit trees while the blossoms in any stage remained. It is after the fruit sets that these little snout beetles begin to sting the plums. It first makes a small, crescent-shaped incision, with its snout, in the skin of the plum, then, turning around, inserts an egg in the wound.

These insects begin their depredations as soon as the fruit is set, and continue until the middle or last of July. Thus it would seem to be necessary to spray the fruit at intervals from the time it sets until the latter period, which, in fairly dry seasons, might be three or four times.

From the foregoing, it will be seen that it is worse than useless to spray the trees of either orchard or garden fruits while the blossoms are yet seen; and, also, that the insect most damaging to the apple crop and the curculio, are very distinct species, although the latter does frequently infest the apple to some extent.

Lewiston, Maine.

SUPERS.

Super Question, and Suggestions Concerning It.

Written for the *American Bee Journal*
BY M. M. BALDRIDGE.

The following interesting letter is from a Wisconsin bee-keeper of 32 years experience, and an expert in the production of comb honey:

"In regard to supers, this has been a topic of much thought and study with me, and yet I am as much in the dark as ever. As you say, we need a super that will hold the sections close together, and expose as little as possible of their outside surface to the bees.

"I have tried the old style Heddon super, and use it some now. My objection to it is, that the bees glue in the sections at times so tight as to injure the honey to remove them. I got the T super of Dr. Miller, and discarded that after one year's trial. When one section is out, the others are liable to tumble out. I sent also to Frank Eaton for one of his supers. This has slats on the bottom, and the same shape as the open-sided section,

on which the section rests. It has also a drop-leaf side. I have sold all the supers on this plan but one.

"I aim to have as little machinery about my apiary as possible, and, therefore, I do not like the wide-frame supers, nor the separators. By using sections seven to the foot, I seldom have any bulged ones, even without separators. I want a super that will permit me to take out any section from the outside and place it in the middle, and *vice versa*, in case I so desire.

"Geo. E. Hilton makes a T super with the tins stationary, in which, on one side, is a follower, and by means of two thumb-screws the sections are pressed sidewise close together. This super can be turned upside down, and the sections will remain in place, but by a slight turn of the thumb-screws the sections will drop down $\frac{1}{2}$ of an inch, and then the super may be lifted upward and removed. But here comes the trouble with propolis. As the T tins separate the rows of sections a trifle, the bees will fill the openings with propolis unless another set of tins is used on top also. But I have sent for one of these supers, and shall give it a thorough trial, if I live long enough.

"Very few bee-keepers have given the super question the proper attention it deserves. The subject is by no means exhausted.

"As a rule, I sell my comb honey here at home, cash down, to a commission man, at 15 cents per pound; put up in crates holding 28 sections each. My extracted honey I sell at 12 $\frac{1}{2}$ cents per pound, in lots of from 12 to 50 pounds, to my customers here.

"I have used the different kinds of sections, but prefer the 4-piece dovetailed. I glue the corners usually, but it is a deal of work. I can arrange the 4-piece sections so that they will remain perfectly square. My objection to the one-piece is, that it is seldom square when folded—being diamond in shape."

The foregoing shows that the super question is by no means settled, and that others, aside from myself, are on the hunt for something better than what we have been using. And that what we want will yet be found there is no doubt whatever; for the necessity will secure it, she still being as much the "mother of invention" as she ever was. The super I want, and must have, is one that will keep the sections in close contact with each other, both endwise and sidewise, and which will enable me to secure the outer surface of the tops and bottoms, as well as the sides, when filled with honey, as clean and bright as when first given to the bees. And we must be able to do this

without the use of wide frames, so as to save their expense. We want, however, an arrangement that will also enable us to use separators or to dispense with them at will. Who will come to the rescue?

My correspondent incidentally refers to his plan of selling his crop of honey. It pleases me to learn that he makes the commission man buy his crop outright, and to pay cash for it before it leaves his apiary! This is right, and is precisely what every bee-keeper should do. If all would do this, the wholesale dealer would then take an interest in getting his money back as well as a living profit besides, and this would be one of the means of keeping the price up where it should be.

St. Charles, Ills.

SWARM-HIVERS.

How Colonies are Managed When They are Used.

Written for the American Bee Journal
BY WESLEY DIBBLE.

I am in receipt of numerous letters asking for replies to questions in relation to my article on page 72. As the matters are of importance to many others, I would like to answer them in the AMERICAN BEE JOURNAL.

My experiments with my plan of hiving swarms, leads to narrow entrances and wide entrances of hives, queen-excluders on the outside, and queen-excluders on the inside of the hive-entrances. The former is a complete failure, while the latter is a partial success, and then only when the entrance is clear across the hive.

With a narrow entrance, there is a dark space between the entrance of the hive and the entrance of the tunnel, that the queen will seldom pass over. The entrance must go clear across the hive.

I recommend the queen-excluding honey-board in preference to the queen-excluder on the entrance of the hives. If, however, the metal is used on the hives, it must be on the inside so as to keep the queen back, even with the entrance of the tunnel. As the queen goes back and forward, endeavoring to get out, she will march through the tunnel.

My experiments also lead to using screen-wire, and also queen-excluders for the tunnel that connects the two hives. I advise all not to hesitate to use the wire-cloth in the absence of the queen-excluding metal, as I can see no difference in results between them. I will add here (but not posi-

tively), that there is no need of putting the cone in the tunnel.

I think that Mr. Alley has said that after a swarm has issued, and the queen has strayed under the bottom of the stand—after the bees find her, they will cluster with her, and not leave her for the old hive.

I partially agree with Mr. Alley; but even though the bees return to the old hive when swarming, it is soon conveyed from one bee to another, that the queen is through the tunnel, and they will march through it and cluster with the queen in the next hive.

I can answer several questions by telling how I proceed further on. The hive prepared for the swarm has either half-inch starters of foundation, and confined to six frames, or the same six frames with full sheets of foundation. Then comes the sections, with a queen-excluder between the two. After the swarm has issued 24 hours, or on the next day, exchange the hives, always leaving the surplus case with the new swarm.

To prevent swarms, from four to six days remove, in the middle of the day (when the bees are well in the field), the old colony to a new and permanent location. If, however, the weather is bad, not allowing the bees in the field, shake or brush the frames, and leave the bees on the old stand. A little good judgment will tell how many to leave, and not rob the old colony that is removed.

After removing the old hive, you may introduce a laying queen, a virgin queen, or a ripe queen-cell, or leave them to rear a queen of their own. In either case, I think that you will not be bothered with after-swarms.

I am aware that among practical bee-keepers, there is a diversity of opinion, and upon all subjects they disagree.

HONEY.

Production, Care and Sale when Extracted from the Comb.

Written for the American Bee Journal
BY JAMES HEDDON.

I was so very busy with my many duties about the time you offered the prizes for the three best articles on the production, care and sale (I think it was) of extracted honey, that I never saw the offer and rules given until it was too late for me to compete.

It strikes me that the specialist of the future will be compelled to use a hive and system of management adapted thereto, with which he can manipulate his colonies and surplus cases very rapidly, and with but little

exposure to robbers at a time of year when they are about. He will also need an arrangement or system of manipulation which greatly discourages, or entirely prevents, natural swarming. This he must have, because he must keep more than one apiary, and he must not go to the expense of keeping a man in every one, unless his apiaries contain a large number of colonies, which may be practical in some localities, but not in all.

In coming to the consideration of the special production of extracted honey, let me call attention to one point which I consider the greatest of all in comparing the production of comb with that of extracted honey. Although the sections had to be bought, pounded together, filled with foundation, placed in the case, and after being filled must be removed, scraped and placed in the shipping-crates, all this labor, most of which the production of extracted honey does not involve, is all made up, if not more than counterbalanced, by the fact that the sections could be put together, the foundation put in, all adjusted in the storing case, all taken out of the case after being filled, scraped, put into shipping-crates ready for market by boys and girls, all in doors, at different times of the year, and by persons who could not tell a queen-bee from a mud-wasp; whereas, in the production of extracted honey, the services of an apiarist were necessary, and he had to work in the sun among robbers apart of the time, subjecting himself to occasional stings, etc.

This is about the way extracted honey is produced now-a-days, but it is not the way we are managing at present. We use shallow brood-cases with securely fixed frames, containing eight straight combs. We put them on with a single motion, and we alternate and tier them up so quickly robbers cannot get a taste; and by this tiering up plan we get most perfectly ripened honey without letting but little of it be capped over. Here we save labor and material for the bees, and much labor for ourselves. We remove them from the hive by the case, the same as we do with comb honey; we shake and tremble nearly all of the bees out of these cases, the same as with a comb-honey case, and then stand them up in our screen-house until the few remaining ones desert, just as we do with comb honey; then wheel the cases to the honey-house, invert them on a table, loosen the screws, lift the case away from the shallow frames with a motion, leaving the frames upon the table, all ready to be handled. These we uncap, extract in an automatic extractor with four

comb-baskets, each basket being a little larger than is required to hold a Langstroth frame, and just large enough to easily take two of the shallow frames of my case; consequently we empty eight frames, or just one case at a time. We do not have to touch the combs, or the comb-baskets, in order to reverse, in throwing the honey from both sides of the combs.

This method makes the production of extracted honey easier, simpler, safer, and surer than that of comb honey, and in many places more profitable. This article is long enough, so I will postpone to a future time what I wish to say regarding the care and sale of extracted honey.

Dowagiac, Mich.

BEES BY MAIL.

The Rights of Bee-Keepers Under the Law.

Written for the American Bee Journal
BY C. J. ROBINSON.

With surprise and solicitude I read the remarks of Mr. T. F. Bingham, on page 758 of the BEE JOURNAL for 1889, relating to mailing bees. He is well-known as an apiarist, and well qualified to discuss matters pertaining to bees and bee-keeping, but he does not "fill the bill" as a erudite jurist, yet he usurps the throne of justice and adjudicates, off-hand, "the meaning of the law," and insists that *his* version is the end thereof.

With due respect for individual opinions—I feel that in this case I am justified; yea, in duty bound, to take exception to Mr. Bingham assuming the whole realm of opinion, not allowing room for a back-seat for others.

As a fourth-class P. M., Mr. Bingham holds that bees are *not* mailable matter, except in limited numbers, to agree with *his* notion of law. However, the construction *he* puts on the language of the eighth sub-division of Sec. 372 of the Mail Code, is not authority nor common sense in a legal point of view. Neither Mr. Bingham nor myself are competent to decide as to what the codifiers of the last Mail Code had in view when they formed the eighth sub-division of that section which reads: "Queen-bees and their attendant bees may be sent in the mails when properly put up, so as not to injure the persons of those handling the mails, nor soil the mail-bags or their contents." As to the intent and meaning of the codifiers of the said code, we, the laity, are not called upon, not competent to decide.

The Postmaster General has discretionary jurisdiction, so far as to con-

strue the meaning of the language of the code, but his ruling is subject to appeal and review by the United States courts. It is very probable the codifiers aimed to so phrase that subdivision that great scope might be given its meaning.

From August, 1863, when I mailed the first queen and attendant bees that were ever shipped by mail transit, until March, 1866, there was no provision of law mentioning bees as mail matter, yet if Mr. Henry Alley is good authority, bees have been shipped in the mails each year from the beginning of 1863; and that, too, notwithstanding the Post-Office Department, by special order, prohibited the mailing of bees.

In May, 1873, Hon. B. F. Butler, while a member of Congress, interviewed the Postmaster General with a view of getting the order revoked, but Benjamin was informed that he, the Postmaster, "does not deem it advisable to reverse or modify the former decision." (See the AMERICAN BEE JOURNAL for 1873, page 110).

I mentioned hypothetically, that the language of the law referred to might be construed to include four or five million attendant bees, providing the package did not exceed four pounds. In answer to my opinion thus expressed, Mr. Bingham, with the air of a "court of last resort," declares, unqualifiedly, that the meaning of the law is otherwise—that is, a pound of bees is not mailable matter, and he gives notice that he, "as a Postmaster, should not accept a package of worker-bees as a queen-bee and her attendants, but should regard it as unsafe and not within the meaning of the law, and should refer the matter to the Postal Department at Washington."

Refer what matter? A package of bees is handed to him as mail matter, and postage paid or tendered. Then what is the Postmaster's duty in the case? He should examine the package critically—is not required to count the bees nor measure the package, but estimate or weigh the whole, and his most important official duty is to examine and assure himself that the bees are "securely and properly put up so as not to do injury," as the law directs. To see that the cages are reasonably secure from accident, is all that is incumbent on Postmasters in their discretion.

If a Postmaster should find that a cage of bees which is offered him to mail were not properly put up, he ought to exclude the package—refuse to mail it. But if the cage, on examination, appears to be securely formed and closed to hold the bees in transit—none more competent to decide than T. F. Bingham—then he would not be justified in refusing to mail nor hold-

ing to "refer the matter," but in his refusal or holding, he would be liable for damages sustained by the party offering the package, in an action in the local courts. Suppose a bundle of one thousand, more or less, of queen-bees and their attendants, were handed to Mr. Bingham as mail matter. The bees, all of them, are in one bundle, which weighs less than four pounds, and postage paid. He examines the cage (externally of course), and it appears to be substantial, the bees being properly put up. He considers, "Now I have an old-fashioned notion that it is not the 'meaning of the law,' that so many bees can be mailed in one 'bundle.' No, I will not 'accept' them. I will 'refer the matter to the Department.'" How does that strike men of practical sense?

Mr. Bingham, including certain others, express momentous fear in the matter—fear that Messrs. Pratt, Doolittle and Robinson will, in the course of human events, turn things upside down—they will "let loose a pound of worker-bees in the mail cars, or pouches, or post-office," and then everybody would be so crazy that bees would be excluded from the mails—such apprehension is so unreasonable that but few take stock in it.

They fear that the Postmaster General will be so unwise in case an "accident occurs," as to repeal Sec. 372, or the eighth sub-division. Why not trust Congress to act in the matter? That body ought to be as wise as ourselves.

The "danger" does not lie in the inattention of shippers, nor the probability that accidents might occur. The danger lies in the fact that Postmasters will fail to do their duty; will not see that cages containing bees are securely fitted; will not see that bees are properly put up for mailing. The inefficient Postmasters are the only source of danger, because they generally fail to do that which the law requires them to do, viz: see that the bees, when offered, are properly put up. Who believes or suspects that Messrs. Doolittle or Pratt would offer a package of bees as mail matter unless they were secure from accident? If all shippers of bees put them up as secure as does that hero, Mr. Frank Benton, no rackets would occur. He sends bees in the mails safely from the Alps to South America and to Oregon.

Late in the fall of 1888, I was expecting queens by mail. One day when the mail arrived, I stepped into the Post-office, and when the pouch was emptied, the Postmaster and some of his clerks cried out: "Robinson come here, your bees are swarming." I found one queen crawling into a letter-box, and I secured all of the

bees in a moment, while the postal force stood back, laughing and joking. There were two cages like Mr. Benton's not covered with boards, but paper put over each and clapped together, and must have been slovenly tied. Both cages were wound with twine, such as postal clerks are provided with. Some postal clerk had fixed the cages, and perhaps had been stung, but no harm resulted, only the queens died soon after. The shipper deserved, by reason of his failing to properly put up the bees, a lecture, and the Postmaster ought to have been censured for not refusing to mail the bundle.

Mr. Bingham argues that it is all-important that we be favored with mail transit for queen-bees; but bees by the 1-pound or $\frac{1}{2}$ -pound can be, and should be shipped by express. I confess I am too stupid to see why or how the mails can be of so great benefit in transmitting a very few bees, and not of like benefit in transmitting a $\frac{1}{2}$ -pound, or one or more pounds. True, the express can do the whole business of transmitting bees, as was the case up to my mailing the first queen, and Father Langstroth adopted my plan, and he instituted the business of sending bees by mail before any other queen-breeder got there.

Several years ago, Mr. Ambrozic, of Austria, shipped hives of bees, full size, by mail to New York harbor, and the express took the hives, bees and all from thence to the consignees. The mail charges were nothing compared with express rates. Success to shippers of bees in packages of less than four pounds by mail transit.

Richford, N. Y.

Doolittle on Queen-Rearing.

Queens can be reared in the upper stories of hives used for extracted honey, where a queen-excluding honey-board is used, which are as good, if not superior, to Queens reared by any other process; and that, too, while the old Queen is doing duty below, just the same as though Queens were not being reared above. This is a fact, though it is not generally known.

If you desire to know how this can be done—how to have Queens fertilized in upper stories, while the old Queen is laying below—how you may *safely* introduce any Queen, at any time of the year when bees may fly—all about the different races of bees—all about shipping Queens, queen-cages, candy for queen-cages, etc.—all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact everything about the queen-business which you may want to know, send for “Doolittle's Scientific Queen-Rearing;” a book of 170 pages, which is nicely bound in cloth, and as interesting as a story. Price, \$1.00.

CONVENTION DIRECTORY.

1890. Time and place of meeting.

April 16, 17.—Missouri State, at Marshall, Mo. J. W. House, Sec., Santa Fe, Mo.
 May 1.—Southwestern Wisconsin, at Boscobel, Wis. Benj. E. Rice, Sec., Boscobel, Wis.
 May 3.—Susquehanna Co., at Hopabottom, Pa. H. M. Seeley, Sec., Harford, Pa.
 May 7.—Capital, at Springfield, Ills. C. E. Yocom, Sec., Sherman, Ills.
 May 7, 8.—Texas State, at Greenville, Tex. J. N. Hunter, Sec., Celeste, Tex.
 May 19.—Northern Illinois, at Cherry Valley, Ills. D. A. Fuller, Sec., Cherry Valley, Ills.

In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.



Honey-Drinks—Wintering Well.

I have just been looking over some old copies of the AMERICAN BEE JOURNAL, and in one of them I saw this query: “Please describe a good method of making mead, metheglin, and any other desirable drinks, with honey as main ingredient;” and I felt as though I should like to tell my brother bee-keepers how proud I felt of them when I read the answers they gave, for nearly all of them were thus: “We are cold-water people;” or “Cold water is the best drink I know of.” I, too, think it is wrong to make intoxicating drinks out of an article so pure and good as honey.

I have just returned from my visit in southern Minnesota, to my summer home, in order to be fully prepared for my summer work. Since my return, my brother-in-law (Mr. Wm. Lossing) and I have looked through all the colonies in the cellar, and found them wintering very nicely. I wish to thank the editor for his kind words on page 163. Miss Ida House.

Moward Lake, Minn., March 19, 1890.

Bees in Good Condition.

Bees did well here last season. I commenced in the spring with 31 colonies, and increased them to 70, by natural swarming. I placed them in the cellar the last of December, and took them out about Feb. 15. I lost one colony, but the others are in good condition. I took off 2,500 pounds of extracted honey, and 500 pounds of comb honey, in 1889. My son, Osa, and I, have purchased the entire stock of bees (149 colonies) and bee-keeping utensils of J. E. Hunter, making in all an apiary of 218 colonies.

T. J. BALDWIN.
 Wyoming, Iowa, March 21, 1890.

Mild Winter in Maine.

I think that bees have wintered well in this part of the country. We have had a remarkable winter—there has not been more than a week at a time but wagons have been in here—something very unusual. The temperature has averaged very mild. In about four weeks—April 20—we may expect the bees to be humming, and gathering pollen from the willows and alders. I do not look for much “bee-weather” before that time, in this latitude, as usually an open winter “lingers in the lap of spring.”

L. F. ABBOTT.
 Lewiston, Me., March 22, 1890.

A Comb-Honey Case.

I have been an interested reader of the merits and demerits of comb honey supers. Like J. V. Caldwell (see page 184), I want but one size of sections in my apiary. I cannot champion the old wide frame, as he seems to want some to do; neither do I like the $\frac{1}{2}$ super—in fact, I have discarded all of the numerous kinds of comb honey supers, except the new case with a wide frame which I invented. I will send the BEE JOURNAL office a sample of the frame. There is an unobstructed passage from one end to the other of the case, entirely doing away with the necessity of the four-side bee-entrance section; or any section with insets. It also enables the bees to build their combs flush with the front side of the section, while at the side next to the separator there will be a bee-space, which is a great advantage in crating for market.

Chas. R. Isham, on page 187, says: “By practicing what is called ‘cleaving the separator,’ sections without any insets can be used, and filled with comb flush to the edges all around. In no other way can this be accomplished only by using board separators about $\frac{1}{4}$ of an inch thick.” I accomplished this very desirable result (of having the sections filled to the edge) with this wide frame, which I have been using for five years. It can be made with a projecting top-bar to hang in the hive, or reversible, like the same sent, as may be desired.

Lyons, Wis. F. W. TRAVIS.

[The greatest objection we have to the Case described by Mr. Travis, is the fact that it requires sections specially made for it, $1\frac{1}{2}$ inches wide without entrance insets. The nearer we can come to using the same sections, frames, etc., the better.—ED.]

Drones Flying—Getting Pollen.

To-day all was merry in my bee-yard; 2 colonies had drones flying as freely as in June. How is that for northern Ohio—noisy drones flying on March 21! Tally one more for chaff hives. My 44 colonies have come through the winter in good condition, and all seem to be strong, excepting 2 colonies that are affected with the “nameless bee-disease.” One colony, and its swarm that I hived on Sept. 4, 1889, were both bringing in pollen to-day. The parent colony reared its own queen last September.

F. J. KRUMM.
 Pleasant Bend, O., March 21, 1890.

Success in Bee-Keeping at Last.

I have been trying to keep bees for the last eighteen years, and met with nothing but failure until last year. I then read the AMERICAN BEE JOURNAL, and met with some success. I commenced last spring with one good colony and one queenless colony in a box-hive; I now have 5 colonies in Langstroth hives, and 2 in box-hives, and took over 300 pounds of honey in one-pound sections. My bees are in fine condition.

LEE POWELSON.
 Batavia, Iowa, March 22, 1890.

An Early Bumble-Bee.

A few days ago, while working in the woods, I dug up a bumble-bee. Being surprised at seeing a bumble-bee in the middle of March, I made a careful examination of it. It was lying on its back, with its head downward, in an oblong hole or cell about twice as large as the bee itself. This cell was perfectly solid, having no outlet. It was not lined, and the bee lay next to the dirt. The cell was located near the

root of a hickory tree, about four inches below the surface of the ground, which was covered with leaves, and frozen hard. When first seen, the only evidence of life in the bee was a slight movement of the legs. I took it in my hands and blew my breath upon it for some time, but could not make it able to walk. It had a sad and forlorn appearance. Around its body, or in the indentation around its waist were several small brown lice, all of which were lively. My greatest curiosity is to understand how this poor bee survived a cold winter in this icy and desolate cell without any food. Is a bumble-bee warm blooded? If Prof. Cook will kindly answer this, I shall feel greatly obliged.

F. B. PARKER.

St. Joseph, Mo., March 24, 1890.

[This is nothing new or strange. The queen bumble-bee lives over winter in some cell or crevice. She truly hibernates, as she eats not and moves not. Many insects are infested by lice and mites. I have had ten students studying in my laboratory all winter during our long three-months' vacation. It has been so warm that they have been able to collect most of the time. They got their insects in the earth, rotten-wood, and under leaves. Many of the insects harbored vermin, lice or mites.—A. J. COOK.]

Results of the Last Season.

I commenced the season of 1889 with 47 colonies, and increased them to 70, which are all in good condition now. They are packed in chaff on the summer stands. I took 2,900 pounds of comb honey in one-pound sections, and 250 pounds of extracted honey, last year. A. W. FISHER.

Ganges, Mich., March 24, 1890.

Unfavorable Weather.

The AMERICAN BEE JOURNAL comes to me regularly, and I am much pleased with it—in fact, I would not be without it for many times its cost. The month of March has been bad for the bees—rainy and stormy, with no prospect of fair weather yet. My colonies are yet strong in bees, but if the unfavorable weather continues much longer, I am fearful that our honey crop, which is never very large in this locality, will be quite small, as our best honey-flow commences early in April. J. L. GUTHRIE.

Juliet, Miss., March 22, 1890.

Transferring—Alsike Clover.

An Illinois lady writes to know how to transfer bees from an old-fashioned "Palace bee-hive" to frame hives; also, how to divide the bees, as there are enough for three strong colonies; and what to do with the bees when fastening the pieces of combs in the frames. I would smoke and drive the bees into some box, to have them out of the way; and after the combs are transferred and divided as wanted, I would introduce queens to the two queenless colonies at once, if the queens are handy, and if there are no queens to be used, give ripe queen-cells two days later, which can be had at swarming time. As soon as the transferring is done, the bees in the box are to be divided among the 3 colonies, and allowed to run in at the entrance.

As the time of the year for sowing clover will soon be at hand, I will give my experience with it. I have been sowing Alsike in a small way for the last three years, and

am well pleased with it. When I sow for hay, I have about $\frac{1}{2}$ Alsike and $\frac{1}{2}$ red clover, which makes a very nice quality of hay. I think that it is not necessary to mix the seed one half, as the Alsike is very fine, and goes a great ways when sowed, which does not make it such a dear seed, after all. Now as the basswood trees are mostly cut down for logs and other uses, bee-keepers ought to provide as much Alsike clover and buckwheat pasture for the bees as possible—the more the better, if we are keeping bees for profit; but if we are keeping bees for fun only, we can build up a large apiary in almost any farming country. As for myself, I keep bees for the money there is in the business, as well as pleasure.

The bees had a fine flight to-day, and carried in a lot of flour that I give for pollen. There were also plenty of bright, young bees taking their first flight in front of the strongest colonies, which are indications of rapid breeding. With a few exceptions, the bees have come though so far in fine condition. C. A. BUNCH.

Nye, Ind., March 20, 1890.

Preparing for a Good Season.

My bees are wintering thus far without loss. I increased, last season, from 37 to 73 colonies, and took 1,600 pounds of white honey, for which I received 15 cents per pound in my home market. I am preparing for a good year. I have my hives nearly finished for doubling my apiary the coming season.

L. D. O'DELL.

Protection, N. Y., March 26, 1890.

Cast Skins of the Bacon-Beetle.

I send you a small box containing a piece of comb cut from some brood-frame combs which I purchased from a neighbor who has lost nearly all his bees (about 80 colonies). You will find in the comb shells of a worm covered with long hairs like webs, which would seem to me to be proof against an attack by bees. The worm hatches under a web, and then coats itself with a web (the same as the wax-moth). I think it lives on the brood. Will Prof. Cook please state in the BEE JOURNAL what it is?

Niles, Mich. CHAS. B. FRITTS.

[The cast skins are of the larva or grub of the bacon-beetle—*Dermestes lardarius*. This beetle is described and illustrated in my last edition of the "Bee-Keepers' Guide," on page 414. As I state there, I do not think that it feeds on anything but the dead bees. It is a serious pest in Museums, and especially in insect cabinets. I have never seen these about combs, except when they were stored with dead bees or brood in them. They may gnaw the comb to get to the bees.—A. J. COOK.]

Mice in Bee-Cellars, etc.

When putting bees into the cellar for winter, I will give the plan I use to keep the mice from the bees, viz: I first put posts in the bottom of the bee-house, or cellar, so that when in place they are about 18 inches or 2 feet above the bottom of the cellar. Then put on top of the posts old joints of stove-pipe, cut open and pressed out flat, or sheets of tin $1\frac{1}{2}$ feet or 2 feet broad, so that if mice do climb up the posts, they cannot get up over the edges of the metal sheets. Then I take a good, one-inch board, as wide as I can find, and lay it on top of the posts over the metal sheets, keeping the board as far from the walls of

the cellar as I think necessary, so that the mice cannot get on it. I then put the hives on, and I take poison of some kind that will be sure to kill if mice eat it, and mix it with corn-meal or flour, and put it into pans on the bottom of the cellar, so that if mice or rats do get into the cellar, they will be very apt to get some of the poison.

I would like to ask a question, viz: If the drone and queen trap is used on hives to catch the queen, will it not hinder the workers from carrying in pollen, as the perforations seem too small to admit of the bees getting the loads of pollen through? I have never used the traps, and would like to know.

D. B. CASSADY.

Litchfield, Minn.

[We refer this question to Mr. Alley, for answer.—ED.]

Early Pollen.

Our bees were never in better condition at this season of the year. It is not very different from what it was last September. We have Italians that are ahead of any strain of Italian bees in the world. They are just such a colony of bees as we have tried for nearly 30 years to develop. They possess every desirable quality that even the most timid person could desire. This colony carried in pollen from the pussy-willow on March 18; three days earlier than I ever before knew it to be done here in New England.

HENRY ALLEY.

Wenham, Mass.

HONEY AND BEESWAX MARKET.

MILWAUKEE, March 13.—The demand for honey is very good, and the supply is fair. We quote: White 1-lbs., 12@13c—and if absolutely perfect, sometimes 14c.; choice, white 2-lbs., 12@12 $\frac{1}{2}$ c.; dark 1-lbs., 10@11c.; old 1-lbs., 8@9c. Extracted, white, in barrels and half-barrels, 7 $\frac{1}{2}$ @8c.; in pails and tin, 8@8 $\frac{1}{2}$ c.; dark, in barrels and half-barrels, 6@6 $\frac{1}{2}$ c. Beeswax, 22@25c.

A. V. BISHOP, 142 W. Water St.

DENVER, March 8.—1-lb. sections, 13@15c.; Extracted, 7@8c. These is sufficient comb honey to supply the market till the new crop arrives. Beeswax, 20@25c.

J. M. CLARK CO., 1517 Blake St.

DETROIT, March 7.—Comb honey is quoted at 11@13c. Supply not large, but sales slow. Extracted, 7@8c. Beeswax, firm at 24@25c.

M. H. HUNT, Bell Branch, Mich.

CHICAGO, Mar. 13.—We quote: White clover in active demand and quick sales, on arrival; 1-lbs., 13@14c.; 2-lbs., 12@12 $\frac{1}{2}$ c. Basswood 1-lbs., 12@13c. Buckwheat 1-lbs., 8@9c. Extracted, 8 $\frac{1}{2}$ @7 $\frac{1}{2}$ c. Beeswax—bright, 25@26c.; dark, 23@24c.

S. T. FISH & CO., 189 S. Water St.

BOSTON, March 22.—Fancy 1-lbs., 16c. Anything off-grade sells considerably below 16c. The market is bare of fancy, 1-lb. white honey. Extracted, 7 $\frac{1}{2}$ @8 $\frac{1}{2}$ c. No beeswax on hand.

BLAKE & RIPLEY, 57 Chatham St.

CINCINNATI, March 7.—Good demand for extracted honey, especially from manufacturers at 5@8c. Comb honey, 12@15c. for best. Demand fair.

Beeswax is in good demand at 20@25c. for good to choice yellow. C. F. MUTH & SON, Corner Freeman & Central Aves.

NEW YORK, March 22.—The market is well stocked with extracted honey. We quote: White clover, basswood and California, 7@7 $\frac{1}{2}$ per lb.; Southern, 70@75 cts. per gallon. No demand for comb honey, except for fancy stock, at from 12@13c per lb. Beeswax, 27c.

HILDRETH BROS. & SEGELKEN, 28-30 Broadway, near Duane St.



ALFRED H. NEWMAN,
BUSINESS MANAGER.

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Mention the American Bee Journal.

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Vermillion, S. Dak., Feb. 17, 1890.

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